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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,872	11/13/2003	Chuan Weng	87334.5880	6295

7590 08/04/2006
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WASHINGTON, DC 20036

EXAMINER

TAPOLCAI, WILLIAM E

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/705,872	Applicant(s) WENG, CHUAN	
	Examiner William E. Tapolcai	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-27 and 29-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on April 5, 2006.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weng. Weng discloses the claimed invention, including the percentage of R14 of about 23.7% as is disclosed in column 3, line 62. However, Weng does not disclose the claimed percentage of R14 of about 18.2%. The percentage of R14 is considered to be a matter of obvious choice to one of ordinary skill in the art. No criticality or unexpected results are seen or have been disclosed for the claimed percentage of R14 being about 18.2% as opposed to the disclosed percentage of 23.7%. In view of the small difference between the two percentages, one of ordinary skill in the art would have been able to come up with the claimed percentage of 18.2% without undue experimentation, using only the disclosure of Weng.

4. Claims 26, 27, and 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weng in view of Backman. Weng discloses the claimed invention except for the refrigerant mixture comprising a refrigerant from the group consisting of

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R508a and R508b. Backman teaches a refrigeration system that uses a refrigerant mixture which includes a refrigerant from the group consisting of R508a and R508b. See column 6, lines 15-42, and especially line 35. Thus, it would be obvious to provide the refrigerant mixture of Weng with a refrigerant from the group consisting of R508a and R508b, in view of Backman, for the purpose of reducing the need for refrigerants containing Freon. The various percentages of the different refrigerants in the mixture are considered to be mere matters of obvious choice to one of ordinary skill in the refrigerant art, as no criticality or unexpected results are seen or have been disclosed for the recited percentages.

5. Applicant's arguments filed July 18, 2006 have been fully considered but they are not persuasive. Applicant has traversed the rejection by merely stating the differences between the claimed invention and Weng regarding the percentages of R14. However, the difference between the claimed percentage of R14 at 18.2% as opposed to the disclosed percentage of R14 at 23.7% is considered to be small. Applicant has offered no explanation of why his claimed percentage of R14 at 18.2% is critical. He has stated no reasons as to what improvements or unexpected results the 18.2% of R14 in the refrigerant mixture provides over the 23.7% of R14 that is disclosed in Weng. In view of the lack of any discussion in either Applicant's specification or in his remarks filed in his response to the Office action of April 24, 2006, the Examiner has no choice but to conclude that the claimed percentage of 18.2% is nothing more than an obvious variation over the percentage of 23.7% disclosed in Weng.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William E. Tapolcai whose telephone number is (571) 272-4814. The examiner can normally be reached on Mon. - Thurs., 6:30 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


William E. Tapolcai
Primary Examiner
Art Unit 3744

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July 26, 2006